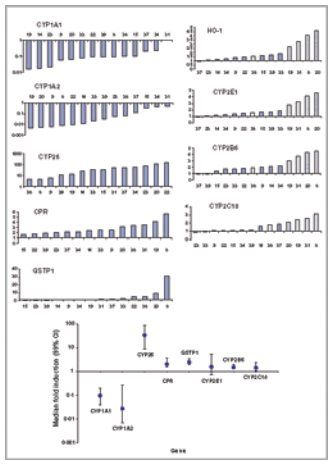
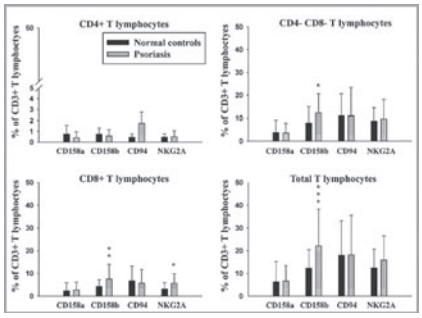
Individuality in cutaneous gene expression: implications for topical drug treatment



Responses to topical drugs used to treat common skin diseases are unpredictable and may potentially be rationalized by interindividual differences in the expression of cutaneous drug-metabolizing enzymes. Smith *et al.* used quantitative real-time reverse transcription–polymerase chain reaction analysis to demonstrate that topical coal tar, all-*trans* retinoic acid (Figure) and clobetasol 17-propionate modulated gene expression in healthy human skin *in vivo*. Marked individuality in gene regulation was seen for the majority of genes examined. Variation in cutaneous drug-metabolizing enzyme expression may therefore contribute to individuality in response to topical therapies for common skin diseases. *Br J Dermatol* 2006; 155:275–281.

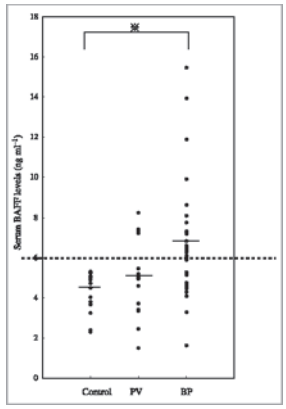
Increased expression of the natural killer cell inhibitory receptor CD94/NKG2A and CD158b on circulating and lesional T cells in patients with chronic plaque psoriasis

Natural killer receptor-expressing T cells are suggested to play a role in psoriasis. Liao *et al.* reported a significant increase of inhibitory CD8+ CD158b+, CD4– CD8– CD158b+ and CD8+ CD94/NKG2A+ T cells in the peripheral blood of patients with psoriasis when compared with controls. Tissue-infiltrating T lymphocytes expressing CD158b, CD94 and NKG2A were found in psoriatic lesions. Furthermore, there was a significant positive correlation between the increased percentage of circulating CD8+ CD94/NKG2A+ T cells and the Psoriasis Area and Severity Index. These findings may signify the possibility of chronic antigen-driven stimulation and dysregulated cytokine production in the pathogenesis of psoriasis. *Br J Dermatol* 2006; 155:318–324.



BAFF in bullous pemphigoid

Recent advances in autoimmune diseases have elucidated that BAFF, a tumour necrosis factor superfamily member that regulates B lymphocyte proliferation and survival, plays a critical role. Asashima and coworkers found significant elevations of serum BAFF levels in patients with bullous pemphigoid (BP), but not in those with pemphigus, compared with normal controls. Although there was apparently no significant association between the BAFF levels and anti-BP180 antibody titres in BP, BAFF levels tended to increase before the anti-BP180 antibody levels increased at the very beginning of BP. BAFF may thus be involved in the pathogenesis of autoimmune bullous disease. *Br J Dermatol* 2006; 155:330–336.



Variability in the clinical pattern of cutaneous side-effects of drugs with systemic symptoms: does DRESS syndrome really exist?

The occurrence of drug-induced cutaneous side-effects with systemic symptoms may be a challenging situation in patients receiving multiple medications. In an attempt to help the identification of the culprit drug in this setting, the clinical and biological pattern of 216 patients receiving various inducing drugs was retrospectively analysed. Although this multiorgan drug-induced reaction appears as a constellation of various symptoms and no unified outline can therefore be defined, clinical and biological alterations may be arranged in different patterns according to the causal drug, data that might prove clinically useful to improve the accurate identification of the culprit drug in patients receiving several important medications simultaneously. *Br J Dermatol* 2006; 155:422–428.